

=> D HIS

(FILE HOME)

FILE CA  
SET COST OFF  
SET PADDING O

FILE REG  
ZINC GLUCONATE/CN  
ZINC GLUCONATE/CN  
ALANINE/CN  
VALINE/CN  
ISOLEUCINE/CN  
PROLINE/CN

10222222

1 S GLYCINE/CN  
2 S SERINE/CN  
2 S THREONINE/CN

ASPARAGINE/CN  
GLUTAMINE/CN  
LYSINE/CN  
ARGININE/CN  
HISTIDINE/CN  
ZINC ACETATE/CN

2222221

1123456789101112131415

FILE CA  
ZINC(W) GLUCONATE  
L11 OR ALANINE  
L13 OR VALINE  
L14 OR ISOLEUCINE/CN  
L15 OR ISOLEUCINE  
L16 OR PROLINE  
L17 OR GLYCINE  
L18 OR SERINE  
L19 OR THREONINE  
L110 OR ASPARAGINE  
L111 OR GLUTAMINE  
L112 OR LYSINE  
L113 OR ARGinine  
L114 OR HISTIDINE

75  
25540  
12451  
17392  
86226  
14264  
30794  
15697  
10247  
16312  
11353  
24239  
17756  
14940

1617181920212223242526272829

=> S L15 OR ZINC(W) ACETATE

1770 L15  
160765 ZINC  
85271 ACETATE  
926 ZINC(W) ACETATE  
1961 L15 OR ZINC(W) ACETATE

L30

=> S L16 AND SPERM?  
16483 SPERM?  
L31 0 L16 AND SPERM?

=> S ZINC AND SPERM  
160765 ZINC  
12636 SPERM  
L32 204 ZINC AND SPERM

=> S L30 AND SPERM?  
16483 SPERM?  
L33 5 L30 AND SPERM?

=> S ZINC AND SPERM?  
160765 ZINC  
16483 SPERM?  
L34 223 ZINC AND SPERM?

=> S L34 AND L28  
L35 1 L34 AND L28

=> D L35

L35 ANSWER 1 OF 1

AN CA107(21):195314p  
TI Chemical constituents of trout seminal plasma after minimal and maximal cell damage treatments with possible applications to semen evaluation assays  
AU Schmehl, M. K.; Graham, E. F.; Erdahl, D. A.  
CS Dep. Anim. Sci., Univ. Minnesota  
LO St. Paul, MN 55108, USA  
SO Aquaculture, 62(3-4), 311-18  
SC 12-6 (Nonmammalian Biochemistry)  
SX 9  
DT J  
CO AQCLAL  
IS 0044-8486  
PY 1987  
LA Eng

=> D AB

L35 ANSWER 1 OF 1

AB Brown trout (*Salmo trutta*) and rainbow trout (*S. gairdneri*) spermatozoa were removed from semen by discontinuous d. gradient centrifugation for minimal damage samples and by centrifugation after plunging in liq. N for maximal damage samples. Seminal plasma samples were then analyzed for mineral, glutamic oxalacetic transaminase (GOT), lactate dehydrogenase (LDH) and total amino acid content. There were increases in K<sup>+</sup> and NH<sub>3</sub> and greater increases in P, Mg, GOT, LDH, and 16 amino acid levels in brown trout seminal plasma after maximal damage treatments. Na and Ca content decreased, whereas no differences occurred in B, Zn, or cysteic acid content after maximal damage treatments. However, in rainbow trout seminal plasma after maximal cell damage, Zn and Ca levels decreased. GOT, LDH and 14 amino acid levels increased. There were no differences in P, Na, Mg, B, or 4 amino acid levels in the latter species. Changes in GOT and LDH content are therefore most applicable to monitoring cellular damage for semen-processing techniques.

=> S L34 AND (L17 OR L18 OR L19 OR L20 OR L21 OR L22 OR L23 OR L24 OR L25 OR L26 OR L27 OR L29)  
L36 6 L34 AND (L17 OR L18 OR L19 OR L20 OR L21 OR L22 OR L23 OR L24 OR L25 OR L26 OR L27 OR L29)

=> D L36 1-6

L36 ANSWER 1 OF 6

AN CA110(5):35648J  
TI pH-dependence of photoinduced electron transfer in zinc-substituted sperm whale myoglobin  
AU Shosheva, A.; Khristova, P.; Atanasov, B.  
CS Cent. Phytochem., Inst. Org. Chem.  
LO Sofia, Bulg.  
SO Biochim. Biophys. Acta, 957(2), 202-6  
SC 6-3 (General Biochemistry)  
DT J  
CO BBACAQ  
IS 0006-3002  
PY 1988  
LA Eng

L36 ANSWER 2 OF 6

AN CA107(21):195314p

TI Chemical constituents of trout seminal plasma after minimal and  
maximal cell damage treatments with possible applications to semen  
evaluation assays  
AU Schmehl, M. K.; Graham, E. F.; Erdahl, D. A.  
CS Dep. Anim. Sci., Univ. Minnesota  
LO St. Paul, MN 55108, USA  
SO Aquaculture, 62(3-4), 311-18  
SC 12-6 (Nonmammalian Biochemistry)  
SX 9  
DT J  
CO AQCLAL  
IS 0044-8486  
PY 1987  
LA Eng

L36 ANSWER 3 OF 6

AN CA102(19):164051t  
TI Zinc reduces turkey sperm oxygen uptake in vitro  
AU Bakst, M. R.  
CS Avian Physiol. Lab., US Dep. Agric.  
LO Beltsville, MD 20705, USA  
SO Poult. Sci., 64(3), 564-6  
SC 12-2 (Nonmammalian Biochemistry)  
SX 13  
DT J  
CO POSCAL  
IS 0032-5791  
PY 1985  
LA Eng

L36 ANSWER 4 OF 6

AN CA97(21):177214b  
TI Sperm-whale oxymyoglobin oxidation in presence of zinc and gold ions  
AU Khristova, P.; Atanasov, B.  
CS Biophys. Chem. Proteins Lab., Inst. Org. Chem.  
LO Sofia, Bulg.  
SO Dokl. Bulg. Akad. Nauk, 35(4), 521-4  
SC 6-3 (General Biochemistry)  
DT J  
CO DBANAD  
IS 0366-8681  
PY 1982  
LA Eng

L36 ANSWER 5 OF 6

AN CA94(17):140166z  
TI Nonapeptide and decapeptide derivatives of luteinizing hormone  
releasing hormone  
AU Nestor, John J.; Jones, Gordon H.; Vickery, Brian H.  
CS Syntex (U.S.A.), Inc.  
LO USA  
PI U.S. US 4234571, 18 Nov 1980, 15 pp.  
AI Appl. or Pr. 47661, 11 Jun 1979  
CL 424-177; A61K37/00; C07C103/52  
SC 34-3 (Synthesis of Amino Acids, Peptides, and Proteins)  
SX 63  
DT P  
CO USXXAM  
PY 1980  
LA Eng

L36 ANSWER 6 OF 6

AN CA90(9):69981w  
TI Destabilization of human sperm membranes by albumin, EDTA and  
histidine  
AU Johnsen, O.; Eliasson, R.  
CS Fac. Med., Karolinska Inst.  
LO Stockholm, Swed.  
SO Int. J. Androl., 1(5), 485-8  
SC 13-13 (Mammalian Biochemistry)  
DT J  
CO IJANDP  
PY 1978  
LA Eng

=> D 3 TI AB

L36 ANSWER 3 OF 6

TI Zinc reduces turkey sperm oxygen uptake in vitro  
AB The effects of Zn2+ and histidine (a Zn2+ chelator) on O2 uptake by  
turkey sperm was examd. in diluents without and with added fructose.  
The presence of 0.5 mM Zn2+ in a diluent without fructose depressed

with 3 mM histidine but did not depress sperm fertility. Histidine had no effect on sperm O2 uptake. Sperm O2 uptake in diluents contg. 1 mM fructose was less in the presence of  $Zn^{2+}$  than in diluents alone or in diluent with histidine.  $Zn^{2+}$  may play a regulatory role in sperm O2 uptake in vivo.

=> S L34 AND INHIB?  
SEARCH ENDED BY USER

=> S L34 AND (INHIBIT? OR DEPRES?)  
307373 INHIBIT?  
15666 DEPRES?

L37 32 L34 AND (INHIBIT? OR DEPRES?)

=> SET PADDING 15  
SET COMMAND COMPLETED

BIB AB

L37 ANSWER 2 OF 32

AN CA110(1):2420a  
TI Effect of selected metal ions on the motility and carbohydrate metabolism of ejaculated human spermatozoa  
AU Kanwar, U.; Chadha, S.; Batla, A.; Sanyal, S. N.; Sandhu, R.  
CS Dep. Zool., Panjab Univ.  
LO Chandigarh 160 014, India  
SO Indian J. Physiol. Pharmacol., 32(3), 195-201  
SC 4-3 (Toxicology)  
DT J  
CO IJPPAZ  
IS 0019-5499  
PY 1988  
LA Eng  
AB Zinc, lead and cadmium in the form of chloride salts when added to a std. assay system contg. 80 .times.  $10^{-6}$  ejaculated washed human spermatozoa caused a dose- and duration-dependent inhibition of their motility. Glycogen phosphorylase, glucose-6-phosphatase, fructose-1,6-diphosphatase, glucose-6-phosphate isomerase, amylase, Mg-dependent ATPase, and lactic and succinic acid dehydrogenases were also inhibited. Inhibitory effects of the metals increased in series zinc < lead < cadmium. EDTA also interfered with the spermatozoal motility and inhibited the enzyme activities.

L37 ANSWER 12 OF 32

AN CA98(1):3134f  
TI Inhibition of human and bovine sperm acrosin by divalent metal ions. Possible role of zinc as a regulator of acrosin activity  
AU Steven, F. S.; Griffin, M. M.; Chantler, E. N.  
CS Dep. Med. Biochem., Univ. Manchester  
LO Manchester M13 9PT, UK  
SO Int. J. Androl., 5(4), 401-12  
SC 13-7 (Mammalian Biochemistry)  
DT J  
CO IJANDP  
IS 0105-6263  
PY 1982  
LA Eng  
AB Human and bovine spermatozoa have been collected and washed repeatedly with isotonic saline to remove seminal plasma inhibitors and activate the acrosin. Then the acrosin activity of the cells was assayed with .alpha.-N-benzoyl-DL-arginine-.beta.-naphthylamide (BANA). The surface-bound enzyme was not inhibited by high-mol.-wt. inhibitors of trypsin but was markedly inhibited by low-mol.-wt. trypsin inhibitors. Divalent metals ( $Zn^{2+}$ ,  $Cu^{2+}$ ,  $Hg^{2+}$ ,  $Co^{2+}$ ,  $Cd^{2+}$ ) were all efficient inhibitors of acrosin on the washed cells. Removal of Zn or Cu from acrosin completely restored activity. Thus, the different levels of Zn in the male and female genital tract may regulate acrosin activity. Aged cells released a sol. acrosin which

was inhibited by serum and seminal plasma inhibitors of trypsin-like enzymes as well as by Zn ions in an identical manner to the surface-bound enzyme.

L37 ANSWER 17 OF 32

AN CA95(23):198271s  
TI Zinc effects on mouse spermatozoa and in vitro fertilization  
AU Aonuma, S.; Okabe, M.; Kawaguchi, M.; Kishi, Y.  
CS Fac. Pharm. Sci., Osaka Univ.  
LO Osaka, Japan  
SO J. Reprod. Fertil., 63(2), 463-6  
SC 3-5 (Biochemical Interactions)  
DT J  
CO JRPFA4  
IS 0022-4251  
PY 1981  
LA Eng  
AB The fertilizing ability of mouse epididymal and capacitated spermatozoa was tested by mixing with normal or zona-free ova. In the presence of  $Zn^{2+}$ , the epididymal spermatozoa failed not only to penetrate the zona pellucida but also to fuse with zona-free ova, whereas no effect was obsd. on capacitated spermatozoa.  $Zn^{2+}$  also inhibited fertilization with spermatozoa preincubated in  $Ca^{2+}$ -free medium. However, shortly after the addn. of  $Ca^{2+}$  to the preincubated spermatozoa,  $Zn^{2+}$  lost its fertilization inhibitory activity.

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L37 ANSWER 23 OF 32

AN CA88(2):11916w  
TI Injectable sterilization agent for domestic animals for selective control of the testes functioning  
AU Fahim, Mostafa S.  
CS University of Missouri Curators  
LO USA  
PI Ger. Offen. DE 2702914, 15 Sep 1977, 42 pp.  
AI US Appl. 757099, 5 Jan 1977  
CL A61K33/20  
SC 63-6 (Pharmaceuticals)  
DT P  
CO GWXXBX  
PY 1977  
LA Ger  
AB Aq. mixts. of Zn salts and tannins are useful in the sterilization of domestic male animals and for treatment of prostate enlargement and diseases of the testes and scrotum. The compns. are injected into the testicles or scrotum. The extent of spermatogenesis inhibition and/or suppression of testosterone (I) [58-22-0] prodn. can be controlled by the site of injection (testes or scrotum), and the amt. and compn. of the injection soln. For example, sexually mature male rats were injected in each testis with 0.05 mL of a soln. of 0.5 mg kastrin (1:1 tannic acid-zinc sulfate mixt.) [64719-34-2]. The treated rats were sterile, but their reproductive organs did not show significant changes in wt. or I concn. in comparison to control rats. Administration of these compns. did not increase whole body, liver and blood Zn concns. or cause histol. changes in the testes.

D 31 BIB AB

L37 ANSWER 31 OF 32

AN CA74(9):40226n  
TI Inhibition of human sperm motility by calcium and zinc ions  
AU Rosado, Adolfo; Hicks, J. J.; Martinez-Zedillo, G.; Bondani, A.; Martinez-Manautou, Jorge  
CS Cent. Med. Nac., Inst. Mex. Seguro Soc.

LD Mexico, D. F.; Mex.  
SD Contraception, 2(4), 259-73  
SC 11 (Mammalian Biochemistry)  
DT J  
CO CCPTAY  
PY 1970  
LA Eng  
AB Motility and viability of human spermatozoa are lost promptly in the presence of 0.01M Cu2+, 0.2M Ca2+, or 0.3M Zn2+, Mg2+, or Ni2+, and monovalent cations had no such effect at a concn. of 0.5M. Pyruvate and adenylate kinase activities were practically completely inhibited by 0.1M Ca2+ or Zn2+.

=> D L31 BIB AB  
'L31' HAS NO ANSWERS

L1 1 SEA ZINC GLUCONATE/CN  
L16 75 SEA L1 OR ZINC(W)GLUCONATE  
L31 0 SEA L16 AND SPERM?

=> D L37 BIB AB

L37 ANSWER 1 OF 32

AN CA110(17):150272u  
TI Isolation and characterization of a DNA-binding protein from pearl millet mitochondria  
AU Lim, Yong Pyo; Kim, Byung Dong  
CS Dep. Plant Sci., Univ. Rhode Island  
LO Kingston, RI 02881, USA  
SD Han'guk Saenghwa Hakhoechi, 21(4), 351-6  
SC 7-2 (Enzymes)  
DT J  
CO KBCJAK  
IS 0368-4881  
PY 1988  
LA Eng  
AB A DNA-binding protein was isolated from pearl millet (*Pennisetum typhoides*) mitochondrial DNA. The DNA-binding protein transformed neg. supercoiled pBR322 DNA into an open circle DNA as a major product, and a linear DNA and a high-mol.-wt. multimer as minor products. The reaction was dependent on divalent cations (Mg++, Mn++, Zn++, and Co++), but was independent of ATP. The enzyme reaction was inhibited by high concns. of monovalent and divalent cations, EDTA, SDS, and spermidine. The putative multifunctional enzyme is tentatively designated as a new class of topoisomerase, since, unlike the bacterial topoisomerase I, it does not produce the ladder intermediates.